PO Job Risk Assessment

Name(s) of Risk Team Members: A. Checco, O. Gang, G. Gu, S. Park, S. Shapiro (facilitator)	**Point Value → Parameter ↓**	**1**	**2**	**3**	**4**	**5**
Job Title: Thermal synthesis, oven and furnace operation **Job Number or Job Identifier: PO-JRA-018**	**Frequency (B)**	**≤once/year**	**≤once/month**	**≤once/week**	**≤once/shift**	**>once/shift**
Job Description: Operation of ovens, furnaces and thermal synthesis apparatus in Physics. Includes heat-treating and drying operations.	**Severity (C)**	**First Aid Only**	**Medical Treatment**	**Lost Time**	**Partial Disability**	**Death or Permanent Disability**
Training and Procedure List (Optional):	**Likelihood (D)**	**Extremely Unlikely**	**Unlikely**	**Possible**	**Probable**	**Multiple**
Rev. #: **0** Date: **February 17, 2005**						
Stressors (if applicable, please list all):		**Reason for Revision (if applicable):**			**Comments:**	

				Before Additional Controls							**After Additional Controls**					
Job Step / Task	**Hazard**	**Control(s)**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
Use of hazardous chemicals, including loading of sample tubes	Hazardous chemicals	See PO-JRA-010	N	1	4	2	3	24								
Routine chemical use	Routine chemical use	See PO-JRA-017	N	1	5	1	2	10								

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Use of compressed gases, including sealing tubes with torches	General compressed gas work	See PO-JRA-012	N	1	4	3	3	36								
Use of pressure devices	Uncontrolled release of pressure	Pressure vessel design, shielding, training	N	1	5	3	2	30								
Operating ovens and furnaces, including inserting and removing objects	Contact with heated objects resulting in burns	Work area conditions, furnace design and insulation, gloves, proper tools or tongs	N	1	5	2	3	30								
	Electrical shock	Furnace design and condition, Tier 1, electrical cord inspection, training	N	1	5	4	1	20								
	Reflex injury from burns or electrical shock	Furnace design and condition, eye protection, proper clothing, Tier 1, electrical cord inspection	N	1	5	2	3	30								
Attaching or modifying electrical wiring, thermocouples, sensors, or control circuits	Electrical shock	Furnace design and condition, Tier 1, electrical cord inspection, disconnect power, training, working hot permits, PPE	N	1	1	5	1	5								
	Reflex injury from electrical shock	Furnace design and condition, Tier 1, electrical cord inspection, disconnect power, training, working hot permits, PPE	N	1	1	2	3	6								
	Contact with heated objects resulting in burns	Work area conditions, furnace design, gloves, proper tools or tongs, cool oven before work	N	1	1	2	3	6								

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Use of open hot furnace or torch	Eye injury from exposure to UV radiation	Work planning, proper goggles	N	1	3	2	2	12								
Visual inspection of operating IR oven	Eye injury from IR light source	Furnace design and condition, protective goggles, remote viewing by camera	N	1	5	4	1	20								
Fracture or explosion of sample tube	Being struck by object, debris from tube	Furnace enclosure, PPE, sample size	N	1	5	2	1	10								
Further Description of Controls Added to Reduce Risk:																

***Risk:**	**0 to 20 Negligible**	**21 to 40 Acceptable**	**41 to 60 Moderate**	**61 to 80 Substantial**	**81 or greater Intolerable**